

REMARKS**REJECTIONS UNDER 35 U.S.C. § 102**

The Examiner has rejected claims 32, 33, and 35 as being anticipated by U.S. Patent No. 5,846,461 to Collins et al. According to the Examiner, Collins teaches a carpet pad comprising polyurethane foam reinforced with scrap rubber. In response to this rejection, claim 32 has been amended to recite that the foam is selected from the group consisting of polyisocyanurate having an iso index above 200, polyurethane having an iso index above 120, and mixtures thereof. Applicants believe this amendment obviates the rejection in view of Collins.¹

REJECTIONS UNDER 35 U.S.C. § 103

The Examiner further rejects claims 1, 2, 5-7, 25-27, and 29-36 as being unpatentable over U.S. Patent No. 5,735,092 to Clayton et al. in view of U.S. Patent No. 5,604,266 to Mushovic. This particular rejection is set forth in paragraph 5 of the Office Action, and Applicants note that paragraph 8 sets forth an identical rejection that is based upon U.S. Patent No. 6,044,604 to Clayton et al. in view of Mushovic. Inasmuch as the relevant disclosure of Clayton '092 and Clayton '604 appear to be similar for purposes for the Examiner's rejection, Applicants will address both rejections of paragraph 5 and paragraph 8 collectively.

The Examiner has found that Clayton '092 and Clayton '604 teach a composite roofing member. These references, however, are silent as to a foam core having been reinforced with a filler material. The Examiner relies on Mushovic to satisfy this shortcoming and concludes that it would have been obvious to employ the ground rubber of Mushovic in the foam core of Clayton motivated by the desire to provide the composite board with low cost, effective reinforcement, excellent insulation properties, and low friability. Reconsideration is respectfully requested.

The Examiner summarizes his understanding of Mushovic as follows:

Mushovic teaches a rigid foam composite material for use in the structural building materials comprising a polyurethane foam reinforced with ground rubber (claim 17) to provide the foam with low cost, effective reinforcement,

¹ Applicants note that claim 32 has also been amended by removing recitation specific to the facer; this has been done primarily to distinguish the claim from claim 1.

excellent insulation properties and low friability (column 3, lines 17-20). This is important to the expectation of successfully practicing the invention of Clayton '092 (or Clayton '604) and thus suggesting the modification.

While the purported teachings of Mushovic, if accurate, might be important to the expectation of successfully practicing the invention of Clayton with modification, Applicants disagree with the Examiner's interpretation of Mushovic. Mushovic does not teach a composite comprising a polyurethane foam reinforced with ground rubber. Therefore, the combination of Clayton and Mushovic does not achieve the presently claimed invention, and the Examiner's basis for combining the references fails.

Instead, Mushovic teaches a rigid or semi-rigid filled resin material that comprises a complex crosslinked network (Column 4, lines 55-60). This network derives from a multi-component polymer system based upon a dual polymer thermoset which forms a continuous matrix phase (Column 3, lines 60-62). When the components are mixed well and cured, both urethane and unsaturated polyester moieties exist in the resulting polymerized structure. (Column 5, lines 63-65). This complex crosslinked network was apparently developed because the formation of rigid polyurethane or polyisocyanurate foams containing more than about 10% by weight fillers proved to be a difficult goal in the prior art (Column 3, lines 10-15).

Thus, Mushovic does not disclose a foam core selected from the group consisting of polyisocyanurate having an index above 200, a polyurethane having an index above 120, or mixtures thereof. And, when Mushovic is considered in its entirety, one skilled in the art would not be inclined to combine its teachings with those of Clayton's inasmuch as Mushovic teaches away from filled polyurethane or polyisocyanurate foams. That is, Mushovic attempts to solve problems associated with the prior art by employing complex crosslinked networks.

The Examiner has also rejected claim 21 in both paragraphs 6 and 9 of the Office Action as being unpatentable over Clayton '092 or '604 in view of Mushovic and further in view of U.S. Patent No. 4,388,366 to Rosato et al. According to the Examiner, Rosato teaches an insulation board for use in roofing having a foam core sandwiched between the two facers to provide the foam core with improved dimensional stability. Accordingly, the Examiner opines that it would have been obvious to apply a facer to both sides of the foam core of Clayton as modified by Mushovic motivated by the desire to provide the foam core with improved dimensional stability.

Inasmuch as claim 21 ultimately depends from claim 1, which Applicants have adequately distinguished above, Applicants maintain that claim 21 is likewise patentable. Furthermore, there is no teaching within Rosato that satisfies the shortcomings of Mushovic or Clayton for purposes of considering the patentability of the present invention.

Further, the Examiner has rejected claims 23, 24, and 28 in paragraphs 7 and 10 of the Office Action as being unpatentable over Clayton '092 or '064 in view of Mushovic and further in view of U.S. Patent No. 5,439,735 to Jamison as evidenced by U.S. Patent No. 4,200,579 to Pennings et al. According to the Examiner, Jamison discloses the use of scrap rubber in building construction materials and that Pennings teaches that it is "known in the art that scrap rubber from recycled tires comprising EPDM scrap material [sic]." The Examiner therefore concludes that it would have been obvious to use the ground rubber formed from recycled tires from the practical view of desirably ecology and excellent sound and thermal insulation.

Claims 23, 24, and 28 ultimately depend from either of the independent claims which have been adequately distinguished above, and therefore Applicants maintain that these claims are likewise patentable. Furthermore, there is no teaching within Jamison or Pennings that satisfies the shortcomings of Mushovic or Clayton for purposes of considering the patentability of the present invention.

DOUBLE PATENTING

In paragraphs 12-17 of the Office action, the Examiner levies several obviousness-type double patenting rejections over Clayton '092 or Clayton '604 combined with Mushovic and/or Rosato and/or Jamison and/or Pennings.

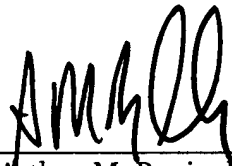
To the extent that Applicants have established the patentability of the pending claims over the prior art references (or combinations thereof) employed by the Examiner in levying rejections under 35 U.S.C. §§ 102 or 103, the obviousness-type double patenting rejections are believed to be rendered moot. Accordingly, Applicants incorporate the arguments made above and apply them against the Examiner's allegations of obviousness-type double patenting.

CONCLUSION

In view of the foregoing amendments and arguments presented herein, the Applicants believe that they have properly set forth the invention and accordingly, respectfully requests the Examiner to reconsider the rejections provided in the last Office Action. A formal Notice of Allowance of claims 1, 2, 5-7, and 21-36 is earnestly solicited. Should the Examiner care to discuss any of the foregoing in greater detail, the undersigned attorney would welcome a telephone call.

No fee is believe due with the filing of this amendment, nonetheless, in the event that a fee required for the filing of this document is missing or insufficient, the undersigned attorney hereby authorizes the Commissioner to charge payment of any fees associated with this communication or to credit any overpayment to Deposit Account No. 06-0925.

Respectfully submitted,



Arthur M. Reginelli, Reg. No. 40,139
Renner, Kenner, Greive, Bobak, Taylor & Weber
Fourth Floor, First National Tower
Akron, Ohio 44308-1456
Telephone: (330) 376-1242
Attorney for Applicants

October 15, 2004